

PEPTITE-2000®
RGD Peptide for Cell Adhesion
Catalog Number 5020

DESCRIPTION

The tripeptide Arg-Gly-Asp (RGD) is an important protein sequence in the binding of proteins to cell surfaces. The RGD motif was initially identified in fibronectin as the minimal sequence that mediates cell attachment. Research has also shown that the RGD motif is present in other proteins such as vitronectin, osteopontin, collagens, thrombospondin, fibrinogen and many other factors. Many adhesive cell surface receptors recognize the RGD sequence for cell attachment.

Advanced BioMatrix's RGD PEPTITE-2000® has been specifically developed for ease-of-use for the researcher. This product is provided in a 5 mg package size to provide sufficient quantity of product for coating a large surface area. The product has been sterilized and is ready-to-use after proper dilution.

APPLICATIONS

PEPTITE-2000® is used to coat tissue culture plasticware for enhanced cell attachment and adhesion. The optimal concentration for cell attachment and culture may differ for various cell types. Some experimentation may be required to determine the optimal conditions for individual cell culture systems. A typical working concentration may range from 0.1 to 10 µg/ml.

CHARACTERIZATION

Purity: PEPTITE-2000® has a purity of ≥95% based on HPLC analysis.

Quantity: The quantity of peptide in each container is 5 mg.

Sterilization: PEPTITE-2000® has been sterilized by E-beam irradiation.

Peptide Sequence:

Ac-Gly-D-**Arg-Gly-Asp**-Ile-Pro-Ala-Ser-Ser-Lys-Gly-Gly-Gly-Gly-Ser-D-Arg-Leu-Leu- Leu-Leu- Leu-Leu-D-Arg-NH₂

Counter Ion: Acetate

Storage: It is recommended that PEPTITE-2000® be stored desiccated at 2 to 10°C or below.

PRECAUTION

Follow typical laboratory safety practices when handling PEPTITE-2000®. PEPTITE-2000® is not for human use as supplied.

INSTRUCTIONS FOR USE:

Use these recommendations as guidelines to determine the optimal coating conditions for your culture system. To maintain sterility, perform all operations in a laminar flow hood. Two options are provided:

Procedure A

1. Remove cap and add 5 ml of serum-free medium or PBS to the bottle.
2. Replace cap and vortex contents. Sonicate the material for a minimum of 15 minutes until the PEPTITE-2000® is completely solubilized.
3. Transfer desired volume of solution from the bottle to a dilution vessel. Dilute to desired concentration using serum-free medium or PBS. A typical working concentration may range from 0.1 to 10 µg/ml.
4. Add appropriate amount of diluted material to culture surface.
5. Incubate at room temperature or 37°C, covered, for 1-2 hours.
6. After incubation, aspirate remaining material.
7. Rinse plates carefully with dH₂O— avoid scratching bottom surface of plates.
8. Plates are ready for use. They may also be stored at 2-8°C damp or air dried if sterility is maintained.
9. Store remaining solubilized PEPTITE-2000® at 2 to 10°C.

Additional note: Include divalent cations (Calcium, Magnesium, or Manganese) in cell attachment solution to obtain optimum cell binding.

Procedure B

1. Remove cap and add 5 ml of sterile 70% Ethanol
2. Replace cap and vortex contents. Sonicate the material for a minimum of 15 minutes until the PEPTITE-2000® is completely solubilized.
3. Transfer desired volume of solution from the bottle to a dilution vessel. Dilute to the desired concentration using 70% Ethanol. Concentrations from 0.1 to 10 µg/ml should be tested.
4. Add appropriate amount of diluted material to culture surface.
5. Leave the coated container, uncovered, in a laminar flow hood until the wells are dry.
6. Rinse plates carefully with dH₂O— avoid scratching bottom surface of plates.
7. Plates are ready for use.
8. Store remaining solubilized PEPTITE-2000® at 2-10°C.

Procedure C

1. Remove cap and weigh out desired quantity of *PEPTITE 2000®*.
2. Add a 10% Dimethyl sulfoxide (DMSO) solution to weighed out quantity of *PEPTITE 2000®*. *Vortex contents* for a minimum of 15 minutes or until the *PEPTITE-2000®* is completely solubilized.
3. Dilute the PEPTITE 2000® solution 10-20 times with water or buffer).